

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Currently Amended) A method for migrating data, said method comprising:

moving a set of data in a data storage system of a computer system;
monitoring a performance of at least one executing application, while said moving is in progress;
calculating a change in a rate of said moving in response to said monitored performance of the at least one executing application; and
modifying a-said rate of said moving in accordance with said calculated change response to said monitoring.

2. (Original) The method for migrating data according to claim 1, further comprising:

setting a performance goal for said at least one executing application, wherein said rate of said moving is increased in response to said monitoring of said performance exceeding said performance goal.

3. (Original) The method for migrating data according to claim 1, further comprising:

setting a performance goal for said at least one application, wherein said rate of said moving is decreased in response to said monitoring of said performance not achieving said performance goal.

4. (Original) The method for migrating data according to claim 1, further comprising:
 - inputting an initial placement of said set of data;
 - inputting a target placement of said set of data;
 - developing a migration plan, said migration plan configured to plan said moving of said set of data from said initial placement to said target placement; and
 - executing said migration plan to implement said moving of said set of data.
5. (Original) The method for migrating data according to claim 4, further comprising:
 - setting a performance goal for said at least one executing application; and
 - wherein said monitoring of said performance is conducted at a periodic sampling interval.
6. (Original) The method for migrating data according to claim 5, further comprising:
 - modifying said rate after said periodic sampling interval in response to said performance of said at least one executing application.
7. (Original) The method for migrating data according to claim 6, further comprising:
 - increasing said rate in response to said performance of said at least one executing application exceeding said performance goal.
8. (Original) The method for migrating data according to claim 6, further comprising:
 - decreasing said rate in response to said performance of said at least one executing application exceeding said performance goal.

9. (Original) The method for migrating data according to claim 5, further comprising:

setting a violation goal, wherein said violation goal is a maximum percentage of performance violations of all accesses; and

restricting, based on the results of said monitoring, said performance violations not to exceed said violation goal.

10. (Original) The method for migrating data according to claim 1, wherein:

said set of data is moved in increments of portions contained within a logical volume.

11. (Currently Amended) A system for migrating data on a computer system, said system comprising:

a monitor configured to monitor a performance of at least one application executing on said computer system;

a controller configured to compare said performance with a performance goal of said at least one application; and

an actuator configured to adjust a rate of movement of a set of data from one location in said computer system to another location in said computer system, wherein said controller is further configured to calculate a change in said rate of movement ~~adjust said rate of movement~~ in response to said comparison of said performance and said performance goal and adjust said rate of movement in accordance with the calculated change.

12. (Original) The system for migrating data on a computer system according to claim 11, further comprising:

a logical volume mover configured to move data in increments of portions contained within a logical volume, wherein said actuator is further configured to issue commands to a manager of said logical volume to adjust said rate of movement of said set of data.

13. (Original) The system for migrating data on a computer system according to claim 12, further comprising:

a planner configured to generate a migration plan in response to an input of an initial placement map of said set of data and a target placement map of said set of data, wherein said migration plan is configured to provide a partially ordered set of moves for said set of data and to be executed by said actuator.

14. (Original) The system for migrating data on a computer system according to claim 12, wherein:

said actuator is further configured to issue a command to increase said rate of movement of said set of data in response to said controller determining said performance exceeds said performance goal.

15. (Original) The system for migrating data on a computer system according to claim 12, wherein:

said actuator is further configured to issue a command to reduce said rate of movement of said set of data in response to said controller determining performance does not achieve said performance goal.

16. (Currently Amended) A computer readable medium on which is embedded one or more computer programs, said one or more computer programs implementing a method for migrating data on a computer system, said one or more computer programs comprising a set of instructions for:

moving a set of data in a data storage system of a computer system;

monitoring a performance of at least one application executing on a computer system;

calculating a change in a rate of said moving in response to said monitored

performance of the at least one application; and

modifying a said rate of said moving in accordance with said calculated change

~~response to said monitoring.~~

17. (Original) The computer readable storage medium according to claim 16, said one or more computer programs further comprising a set of instructions for:

inputting an initial placement of said set of data;

inputting a target placement of said set of data;

developing a migration plan, said migration plan configured to plan said moving of said set of data from said initial placement to said target placement; and

executing said migration plan to implement said moving of said set of data.

18. (Original) The computer readable storage medium according to claim 17, said one or more computer programs further comprising a set of instructions for:

setting a performance goal for said at least one executing application, wherein said monitoring of said performance is conducted at a periodic sampling interval.

19. (Original) The computer readable storage medium according to claim 18, said one or more computer programs further comprising a set of instructions for:

 setting a violation goal, wherein said violation goal is a maximum percentage of performance violations of all accesses; and

 restricting, based on the results of said monitoring, said performance violations not to exceed said violation goal.

20. (Original) The computer readable storage medium according to claim 18, said one or more computer programs further comprising a set of instructions for:

 modifying said rate after said periodic sampling interval in response to said performance of said at least one application.

21. (New) The method for migrating data according to claim 1, further comprising:

 calculating an error value for the performance of said at least one executing application; and

 using said error value to calculate said change in said rate of said moving according to a control theory technique.

22. (New) The system for migrating data according to claim 11, wherein said controller is further configured to calculate an error value for said performance of said at least one application and to calculate said change in said rate of movement using said error value in at least one control theory equation.

23. (New) A system for migrating data on a computer system, said system comprising:

means for monitoring a performance of at least one application executing on said computer system;

means for comparing said performance with a performance goal of said at least one application;

means for calculating a change in a rate of movement of a set of data from one locating in said computer system to another location in said computer system;

means for adjusting said rate of movement of said set of data according to said change; and

means for determining an error value associated with said performance of said at least one application, wherein said means for calculating uses said error value to calculate said change in said rate of movement.